

Does Subspecialty Training Influence Non-Arthroplasty Hip Fracture Fixation Outcomes?

Benjamin Hammond, Danielle M Olson, Dillon Murugesan, Abhishek Ganta, Sanjit R Konda, Kenneth A Egol

INTRODUCTION:

The outcomes of arthroplasty for hip fracture based on surgeon subspecialty have been studied. This study examines differences in postoperative outcomes among patients treated with non-arthroplasty hip fracture fixation by Trauma (OT), Arthroplasty (AR), and Sports Medicine (SM) subspecialists in a health system with established management protocols.

METHODS:

A retrospective review of 1,788 patients who underwent internal fixation for a hip fracture treated with a standard perioperative treatment protocol was executed. Patients were assessed for both in-hospital outcomes as well as readmissions and complications and compared based on the subspecialty of the treating surgeon (OT, AR, or SM). Fixation types included closed reduction percutaneous pinning, intramedullary nail, sliding hip screw, and other open reduction internal fixation constructs.

RESULTS:

Baseline patient characteristics varied across subspecialties including age, race, GCS, ASA, and ambulatory status.

Post-operative ICU admission rates were higher in AR compared to OT surgeon-treated patients ($p = 0.032$). 30 and 90-day readmission rates were also higher in AR compared to OT ($p = 0.019$, $p = 0.041$). However, after adjusting for baseline health factors, there were no significant differences in any of these outcomes in a logistic regression. Mortality during admission ($p = 0.599$), fracture-related infections ($p = 0.392$), healing rates ($p = 0.822$), revision surgery ($p = 0.468$), and length of hospital stay ($p = 0.615$) did not differ significantly across groups.

DISCUSSION AND CONCLUSION:

Although some patient characteristics differed among patients treated by orthopedic surgeons with varying subspecialty training, their outcomes did not. Adjusted analyses suggest that baseline health factors explain observed differences in ICU admission, 30-, and 90-day readmission rates. These data support the implementation of standardized treatment algorithms rather than directing hip fracture patients to specialty-trained surgeons.